

V. Traffic Control

Flagger

(Specification 2528; MUTCD)

Since flaggers are required for most traffic control situations, the importance of their duties and responsibilities must be stressed. Flagger operations, equipment, and apparel shall conform to the current Iowa DOT Flagger's Handbook. Copies of the Flagger's Handbook are available from the Iowa DOT and should be distributed to flaggers and inspectors.

A flagger's primary duties are to:

- guide traffic safely through work areas
- protect fellow workers
- prevent unreasonable delays for motorists
- answer motorist questions knowledgeably

Rules of Conduct

- Flaggers should be neat in appearance.
- Conversations with the public should be polite. Do not engage in small talk or argue with vehicle occupants.
- Make sure to use the proper sign and flagging position for the situation.
- Stand alone. Do not mingle with the work crew or traveling public. Remain standing at all times and never turn your back on traffic.
- Do not leave your position for any reason unless relieved.
- Stay alert. Don't be distracted by the work operation.

Equipment

All personnel in the highway right-of-way shall wear ANSI 107 Class 2 apparel at all times when exposed to traffic or construction equipment.



- ANSI 107 Class 2 vest, shirt or jacket.
- Soft cap meeting ANSI 107 headwear requirements.
A hard hat in the same colors is an acceptable alternative to the soft cap, and may be required in certain situations.
- For nighttime operations, additional clothing requirements include ANSI 107 Class E pants. Flaggers should also consider wearing highly visible retroreflective gloves.
- A standard combination STOP/SLOW staff-mounted paddle sign with approved retroreflective sheeting.
- Red Flag (optional) - permitted only when stopping traffic in combination with the STOP/SLOW sign, or in emergencies when standard signs are not available.



Methods & Procedures

- For a pilot car situation, the flagger should stop the first vehicle while positioned on the shoulder adjacent to the lane being stopped. Do not stand in the path of an approaching vehicle.
- After the first vehicle has stopped, the flagger will move to the centerline position and stop succeeding vehicles from that position.
- To release traffic, return to position on shoulder and signal drivers to proceed into the open lane.
- Methods and procedures for other situations are addressed in the Flagger's Handbook.



TC-282 Uneven Lanes

Traffic control layout to address centerline drop-off for design lift thickness 2" or less (without fillet) and design lift thickness greater than 2" (with fillet).

TC-418 Lane Closure on Divided Highway

Traffic control layouts for right lane and left lane closures on divided highway.

TC-419 Lane Closure on Undivided Highway

Traffic control layouts for right lane and left lane closures on a four-lane undivided highway.

TC-420 Lane Closure at Ramps

Traffic control layouts for right lane and left lane closures through ramp entrance and exit tapers.

TRAFFIC CONTROL PLAN	
	108-23 04-04-85
<p>1. Through traffic shall be maintained on both IA 17 & D18 at all times.</p> <p>On IA 17, the contractor shall maintain a minimum available lane width of 14.5 feet (includes available shoulder) to allow for wide loads which may use this route.</p> <p>2. Traffic control on this project shall be in accordance with Standard Road Plans TC-1, TC-202, TC-212, TC-213, TC-214, TC-232, TC-233, and TC-282. For additional complementary information, refer to Part 6 of the Manual on Uniform Traffic Control Devices and the current Standard Specification.</p> <p>3. This project plan includes proposed stop sign rumble strips to be replaced per Standard Road Plan RR-7 at their existing locations on South bound IA 17 near the West junction with D20. Current specification section 2303.03 G, 5, shall apply.</p>	

Plan Notes and Detail Plan Sheets (Specification 2528)

A Traffic Control Plan (Tabulation 108-23) is included in the plans to provide special instructions such as whether traffic is to be maintained through the work area, staging sequence, storage of contractor's equipment and materials, responsibility for signing, etc. Review the project plans for traffic control notes and study special Detail Sheets to become familiar with specific traffic control requirements for the project. Please note that many common traffic control notes previously included in the plans are now found in Section 2528 of the standard specifications.

Traffic Quality Control

The Contractor must monitor traffic operations and submit proposed Traffic Control Plan changes to the Engineer for



approval prior to changes being made. The Contractor must coordinate all changes to the Traffic Control Plan and coordinate all traffic control operations, including those of subcontractors and suppliers.

Traffic Control Devices

(Specifications 2528 & 4188; MUTCD)

All traffic control shall be in accordance with the current edition of the MUTCD, Part 6, as adopted by the Iowa DOT. Traffic control devices shall meet the applicable NCHRP Report 350 criteria for the category of device in question. The device categories and requirements are explained in Specification Article 2528.01.

Signs

Signs shall be of the size and type shown in the contract documents and shall utilize retroreflective sheeting meeting requirements of Specification Article 4186.03. Signs for traffic control zones in duration of four calendar days or more shall be mounted on fixed posts. For duration less than four days, signs may be mounted on fixed posts or movable skids. Signs must be properly positioned and maintained in a condition so that the message is clearly readable when viewed from a vehicle. Gender specific signs, such as FLAGMAN and MEN WORKING, are not allowed. Signs shall either be neutral gender, such as FLAGGER, or equivalent symbol signs.

Channelizing Devices

Channelizing devices shall be of the type shown in the contract documents. Specification Article 2528.03, C, gives specific requirements for Type I, Type II, and Type III Barricades, situations for their respective use, and allowable substitutions. Cones, vertical panels, drums, and tubular



markers shall meet the current requirements of the Manual on Uniform Traffic Control Devices (MUTCD) and Specification Section 4188. Cones may be used as channelizing devices during daylight hours only. Different channelizing device types are not to be intermixed on a project. Channelizing devices may be placed up to 2 feet beyond centerline or lane line at specific locations where actual work activity is taking place. Devices must be returned to original position when work activity has passed. Channelizing devices may be omitted during work hours in areas where placement interferes with work.

Pilot Cars

Pilot cars shall be pickup trucks or automobiles carrying the Contractor's company insignia, equipped with G20-4 signs reading: PILOT CAR - FOLLOW ME. The bottom of the signs shall be mounted at least 1 foot above the top of the vehicle's roof. The message must be clearly visible from both in front of and behind the vehicle. Pilot cars shall be operated to maintain an appropriate uniform speed through the work area, no greater than 40 miles per hour.

Temporary Barrier Rail

Temporary barrier rail requirements are included in the plans or other contract documents. Unless otherwise shown, precast concrete units shall be used.

Temporary Traffic Signals

Traffic signal requirements are shown in the contract documents. Traffic signal details are included in Part 6 of the MUTCD. Actuated signal controllers are to be provided. All signal heads mounted over traffic shall be centered over the appropriate traffic lane. Clearance for overhead wiring shall be a minimum of 18 feet.



Monitoring and Documentation (Specification 2528)

Sign Checks and Surveillance

- Check for cleanliness of the sign surface.
- Check to see that the sign is in good repair.
- Check sign spacing and positioning.
- Check to see that signs are properly anchored.
- Check signs a minimum of once in AM and once in PM, or whenever a work zone change is made.
- Check signs at night occasionally if traffic control features are to remain in place during nighttime hours.
- Signs must be checked and documented in the field book daily.
- Document time when correction of noncompliance is made.

Traffic Quality Control

The Contractor is responsible to review all traffic control operations for compliance with contract documents and maintain a project traffic control daily diary, to be submitted to the Engineer for inclusion in the project records. The diary shall include:

- All reviews of traffic control devices and operations.
- Approved changes to traffic control.
- Incidents affecting the efficiency and safety of traffic.
- List of trained flaggers used on the project.

The Contractor shall have a technician on staff that has attended and passed the exam in an ATSSA Traffic Control Technician or International Municipal signal Association (IMSA) Work Zone Traffic Control training class, even though the Traffic Control portion of the contract may be subcontracted. This Traffic Control

LOCATION	POSSIBLE PROBLEM	POSSIBLE TRAFFIC CONTROL CHANGE
4. Accidents or incidents occurring in the work area of the work zone.	Workers or equipment too near traffic stream.	<ul style="list-style-type: none"> • Move equipment. • Instruct workers to wear hard hats and safety vests. • Instruct workers to stay as far as possible from traffic stream. • Install Highway Advisory Radio.
	Speeds too high or high variance in speeds.	<ul style="list-style-type: none"> • Install rumble strips. • Provide extra enforcement. • Add advisory speed signs.
	Access and egress of work vehicles into traffic stream.	<ul style="list-style-type: none"> • Relocate work vehicle access and egress points. • Have contractor furnish flaggers.
	Inefficient work zone traffic capacity.	<ul style="list-style-type: none"> • Provide alternate routes. • Change work schedule to exclude peak traffic periods. • Install Highway Advisory Radio. • Reduce length of work area.
5. Accidents or incidents on two-lane, two-way traffic operations on divided highways.	Flaring in no-passing zone.	<ul style="list-style-type: none"> • Provide extra enforcement. • Maintain full use of construction of two-way section. • Use changeable message signs.
	Inefficient work zone traffic capacity.	<ul style="list-style-type: none"> • Provide alternate routes. • Use changeable message signs. • Notify media.
6. Accidents or incidents on one-lane sections with alternating direction traffic operations.	Excessive vehicle queues and delays.	<ul style="list-style-type: none"> • Reduce length of section.
	Improper flagging techniques.	<ul style="list-style-type: none"> • Train flaggers. • Move flaggers upstream.
7. Accidents or incidents occurring at median crossovers.	Inefficient crossover delineation.	<ul style="list-style-type: none"> • Remove old pavement markings. • Install new pavement markings. • Install raised pavement markers.
	Speeds too high or high variance in speeds.	<ul style="list-style-type: none"> • Provide extra enforcement. • Add advisory speed signs.
	Shifting of cargo loads in trucks.	<ul style="list-style-type: none"> • Provide extra enforcement. • Add advisory speed signs. • Install raised pavement markings.

Appendix 5-B-2



Technician shall be responsible for the overall management of the contractor's quality control program for traffic control.

While the new quality control specifications shift more of the traffic control monitoring and documentation responsibilities to the contractor, the inspector must still be alert to recognize noncomplying conditions or problems developing, and respond accordingly.

Noncompliance

(Specifications 1107.08, 1107.09 & 2528; Construction Manual section 3.21)

Inspectors must be familiar with traffic control requirements in order to recognize noncomplying conditions. Ground rules for dealing with noncompliance should be discussed with the Contractor at the Preconstruction Conference.

Reporting

- Be alert to recognize potential problems early in the project.
- Discuss traffic control issues with the Contractor before full-blown problems develop.
- Response must be immediate.
- Report noncompliance to the contractor and see to it that corrections are made promptly.
- Cases of noncompliance involving Subcontractor should be reported to the Prime Contractor in addition to the Subcontractor.

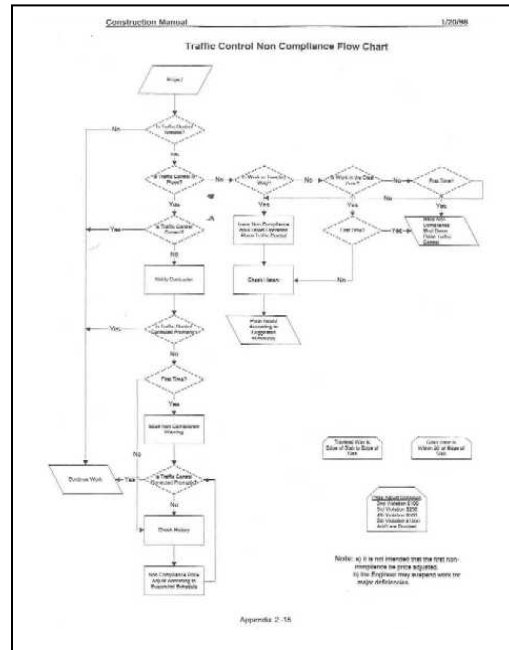


Repeated Violations

- All incidents of noncompliance should be reported to the Engineer.
- In the case of repeated violations and/or major deficiencies, the supervising inspector will issue a Noncompliance Notice (Form 830245) to the contractor.

Penalties and Price Adjustments

- Maintain good records of all incidents of noncompliance; specifics are important for determining penalty.
- If a penalty is to be assessed, a Noncompliance Notice must have been issued at the time of the infraction.
- It does not necessarily follow that penalty will be assessed for every Noncompliance Notice issued.



The flowchart in Construction Manual Appendix 2-15 provides guidance on applying traffic control noncompliances and price adjustment assessments for various traffic control situations.

Accidents

(Construction Manual section 5.23)

Accidents occurring on construction projects must be investigated and reported promptly. Procedures for handling accidents during non-working hours will be set up in advance by the Resident Construction Engineer. Review Section 5.23 of the Construction Manual, Report of Investigation - Vehicle Accident (Appendix 5-1), Work Zone Incident Report (Appendix 5-2) for accident reporting forms and procedures.



Procedure for handling an accident during working hours:

- Assist at the accident scene.
- Notify your office.
- Gather the following accident information:
 - Vehicle information
 - Pictures, diagrams, etc.
 - Weather conditions
 - Witnesses
 - Sign locations
 - Copies of the Investigating Law Officer's report
 - Other pertinent information